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RAISING DEER IN CAPTIVITY

Prepared in the Division of Wildlife Research

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A large number of deer are raised successfully in the United States on farms, estates, and preserves, and in exhibition parks. Before steps are taken to keep deer in captivity, information on laws and regulations relating to raising and disposing of these animals should be obtained from the game or conservation commission of the State concerned. Most States issue licenses for raising deer and regulate the sale of venison and hides. The market for live deer and venison depends on the situation, transportation, storage facilities, and the cost of reaching prospective purchasers. In most large cities there is usually a fair demand for prime venison at reasonable prices.

ENCLOSURES

Under favorable conditions, deer thrive in fenced enclosures. A combination stock-and-poultry-type fence, about 8 feet high, of 2- to 4-inch-mesh light woven wire, is generally adequate to confine deer and exclude dogs, although white-tailed deer that are continually harassed by dogs or are frightened in other ways have been known to jump over an 8-foot fence. On hillsides or where snows are deep, one or two strands of heavy wire may be added at the top or an overhang provided.

Electric fences have been used successfully in keeping deer away from cultivated crops. They are practicable for deer enclosures both as a means of added protection against molestation and of keeping the deer confined in

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larger and less expensive enclosures. Two smooth strands of wire may be strung on posts, the wires spaced about 24 to 40 inches from the ground. Electricity may be supplied by a 6-volt battery, with an intermittent current and an automatic shut-off as safety provisions. Various hookups should be studied to find the one best suited to the situation and length of fence. Although snow and ice interfere seriously with fence operation, accustoming the deer to respect the electrified wires may prevent losses in times of emergency. Before installing an electric fence State regulations on the subject should be consulted.

For year-long range, a single deer may require 20 to 30 acres of ordinary wild land, but on rich land having dense vegetation it may thrive on a much smaller acreage. Moderately rough ground is preferable, with plenty of brush and timber, some swamp, and streams or springs. A little evergreen cover is a great help in winter protection. When provided with clover, alfalfa, soybeans, cowpeas, peanuts, grains, or other cultivated forage, the animals can be kept on 1 to 2 acres each.

FOOD REQUIREMENTS

Deer require a variety of food, plenty of good water, and a little salt at all times of the year. They do not thrive on grass and eat little of it, except in early spring. Although they subsist largely by browsing, in summer they eat a variety of plants, including clovers, dandelions and other weeds, as well as grains, garden vegetables, and fruits. Late in summer and fall they fatten on such rich foods as seeds, grains, and the mast of oaks, beeches, and pecans. In winter they browse upon the leaves, buds, twigs, bark, and seeds of a great variety of trees, bushes, and herbaceous plants, and in time of deep snow they gather in swamps and evergreen thickets, where they establish trails and dig for mosses and other ground vegetation. In deep forests, mosses and lichens form a fair proportion of the diet.

Supplemental winter food can be provided by felling or trimming the branches of occasional trees of little commercial value, as aspens, birches, maples, cedars, and others that provide buds, bark, and browse. Where artificial winter feeding is necessary, deer should have clover or alfalfa hay, pea or bean straw, and a small daily ration of unthreshed grain.

No attempt is made in this leaflet to record all the foods eaten by deer, but a few typical examples for each section of the country are listed. For a better understanding of the plants here mentioned, their scientific names (chiefly genus only) are given on page 4.

In the Northeast, Lake States region, and Appalachian Mountains, winter deer foods include arborvitae, yellow, paper, and black birches, elder, red-osier dogwood, witch-hobble, blueberry, yew, apple, mountain-ash, red cedar, chokecherry, blackberry, serviceberry, and also to some extent, striped, red, and mountain maples, willows, honeysuckle, greenbrier, clubmoss, and sweet-fern are taken. In overbrowsed areas, spruce, balsam fir, aspen, alder, hemlock, laurel, and rhododendron are eaten, although when consumed in

large quantities as the sole diet they may lead to starvation or other unfavorable developments.

In the South, the winter food preferences are sweetgum, sumac, red cedar, smilax, loblolly pine, post oak, and mushrooms. The summer foods preferred are sweetgum, French mulberry, smilax, sumac, black willow, and lespedeza, partridge-pea, aster, milk pea, ironweed, and other herbaceous plants.

In the West, the winter foods preferred are bitterbrush, western and Utah junipers, serviceberry, mountain-mahogany, cliffrose, mountain-ash, vine maple, dogwood, buckbrush, salal, certain willows, blueberry elder, snowberry, and blueberry.

WHITE-TAILED DEER

Herds of white-tailed deer (Odocoileus virginianus and varieties) should be maintained in the proportion of one buck to about four or five does. Breeding should be only from choice bucks. Females breed in their second autumn (in October and November) and have their first young, usually one fawn, during the following spring (in May or June); later births are commonly twins. Since these deer breed at an earlier age and produce twins, they increase about twice as fast as cattle. The young are weaned at about 6 months of age. When possible, they remain with the doe through the first winter.

The antlers are shed annually by the bucks in midwinter, usually in January or February, and new antlers start within a few weeks. By August these are full-grown and hardened, and in September the velvet is rubbed off and the points are polished for fighting. During the mating season the bucks are especially dangerous and should be avoided.

The venison is at its best in fall or early in winter, when the deer are fat and in prime condition. In the North, with its cold weather and freezing nights, the meat is easily kept and handled for market. It is in greatest demand, of course, during or after the hunting season. It keeps well for a few months in cold storage, and in most States, can be sold at any season under suitable regulation. The skins are also at their best in fall and early in winter and have their greatest value for buckskin at that season.

In any region native deer have the advantage of being acclimated and adapted to local food and cover. It would seem best, therefore, to start breeding with native stock. If larger or more vigorous animals are desired, selected bucks might be introduced from other localities.

One of the smallest white-tailed deer in the United States (O. couesi) is from southern Arizona and new Mexico. The Virginia group of whitetails varies from the small dark forms in Florida and other Southeastern States to the much larger, lighter colored deer of the Northern and Rocky Mountain States. All varieties are suitable for propagation and should do well in their natural environment.

MULE DEER

The large-eared, fork-horned, round-tailed mule deer of the West (Odocoileus hemionus and varieites), which range from the Missouri River valley to the crest of the Sierra Nevada and Cascade Mountains, and south into Mexico, differ considerably in habits from the smaller white-tailed deer. They generally occupy more open, rugged country, and in many localities they migrate regularly early in winter from the high mountains to the lower foothills or valleys. Like the whitetails, mule deer are easily kept in captivity, and are especially suitable for the rough, open country of their native range, where cover is scarce and food widely scattered. In winter, they depend largely on browse, and in summer on more succulent vegetation. Their favorite foods in summer are clovers and other leguminous plants and mushrooms, but even at that season they consume much browse and a great variety of other plants. In food requirements and rate of breeding, mule deer are similar to the whitetails. The venison, though generally considered just as good, is slightly coarser and darker. The several varieties of mule deer are adapted to high, cold sections, to the middle zones, and to the low, hot valleys of the Southwest and Mexico.

BLACK-TAILED DEER

Black-tailed deer (Odocoileus hemionus columbianus and O. h. sitkensis) found in the Pacific coast region from central California to southern Alaska, resemble mule deer in appearance and in having forked antlers, but are more like whitetails in size and habits, and like these they have bushy tails. Generally forest- or brush-dwelling animals, they seek dense cover by day and feed in the open mostly during morning and evening hours. In the mountains they migrate to some extent to escape the deep snows of winter, but in the low country they are local in range throughout the year. Blacktails browse a great deal, and in fall they fatten on acorns, chinquapins, or other available nuts. They are easily kept in captivity, breed and multiply as rapidly as any deer, and afford excellent venison.

SCIENTIFIC NAMES OF PLANTS MENTIONED IN THIS LEAFLET

Alder (Alnus sp.)
Apple (Malus sp.).
Arborvitae (Thuja occidentalis).
Aspen (Populus tremuloides).
Aster (Aster spp.).
Birch, black (Betula lenta).
paper (B. papyrifera).
yellow (Betula spp.).
Bitterbrush (Purshia tridentata).
Blackberry (Rubus spp.).
Blueberry (Vaccinium spp.).
Buckbrush (Ceanothus cuneatus and C. velutinus).
Cedar, red (Juniperus virginiana).
Chokecherry (Prunus sp.).
Cliffrose (Cowania stansburiana).
Clubmoss (Lycopodium spp.).
Dogwood (Cornus californica and C. stolonifera).
red-osier (C. stolonifera).
Elder, blueberry (Sambucus caerulea).
common (S. canadensis).
Fir, balsam (Abies balsamea).
Greenbriar (Smilax spp.).
Hemlock (Tsuga spp.).
Honeysuckle (Lonicera spp.).
Ironweed (Vernonia spp.).
Juniper, Utah and western (Juniperus spp.).
Laurel (Kalmia spp.).
Lespedeza (Lespedeza spp.).

Maple, mountain (Acer spicatum).
red (A. rubrum).
striped (A. pennsylvanicum).
vine (A. circinatum).
Mountain-ash (Sorbus spp.).
Mountain-mahogany (Cercocarpus spp.)
Mulberry, French (Callicarpa americana).
Mushrooms (group name for certain fungi).
Oak, post (Quercus stellata).
Partridge-pea (Chamaecrista fasciculata).
Pea, milk (Galactia spp.).
Pine, loblolly (Pinus taeda).
Rhododendron (Rhododendron spp.).
Salal (Gaultheria shallon).
Serviceberry (Amelanchier spp.).
Witch-hobble (Viburnum alnifolium).
Yew (Taxus canadensis).

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